

ABSTRACT

In a manufacturing method of a thin film transistor (1), the oxide film forming step is performed whereby: a process-target substrate (2) having a surface on which a gate oxide film (4) should be formed is immersed in an oxidizing solution containing an active oxidizing species; and a gate oxide film (4) is formed through direct oxidation of polycrystalline silicon (51) on the process-target substrate (2). With this step, a silicon dioxide film (42) is formed while growing a silicon dioxide film (41) on the process-target substrate 2. Accordingly, the interface between the polycrystalline silicon (51) and the gate oxide film (4) is kept clean. The gate oxide film (4) is uniformly formed with excellent quality in insulation tolerance and other properties. Therefore, the thin film transistor (1) contains a high quality oxide film with excellent insulation tolerance and other properties which can be formed at low temperature.